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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,139	09/10/2003	Christopher W. McNutt	64671-0480	3033

20480 7590 01/05/2005  
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EXAMINER

NGUYEN, KHIEM M

ART UNIT PAPER NUMBER

2839

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/659,139

Applicant(s)

MCNUTT ET AL.

Examiner

Khiem Nguyen

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/08/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,4,5 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 2,5 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Upon further reconsideration, the finality of the rejection of the last Office action is withdrawn due to the consideration of new issue and of new prior art. A new office action follows.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) or EP'017 in view of Yang et al. and Hawtof et al.

The APA or EP'017 disclose a buffer tube for use in a fiber optic cable which comprise a blend or an alloy of polymer materials which are not of polypropylene and polyphenylene oxide as being recited in the claims of the present invention.

However, the use of a blend or alloys of different polymers as materials for buffer tubes are old and well known. Yang et al. Discloses that it is known to made a buffer comprising an alloy of polypropylene-polyethylene copolymer. Hawtof et al. discloses it is known to use polyphenylene oxide as coating for optic Fibers.

Therefore, it would have been obvious for one of ordinary skilled in the art to construct or provide the buffer tubes of the APA or EP'017 out of an alloy of

polypropylene and polyphenylene oxide in view of the teachings of Yang et al. and Hawtof et al. Yang et al. provide the suggestions or motivation for using an alloy of different polymers as materials for buffer tube construction to provide better mechanical and electrical properties. Also, it is noted that the preambles of claims 2 and 11 only set forth "a buffer tube for use in a fiber optic cable" with no optical fiber structure being recited, the claims had been interpreted for use in any buffer tube construction.

Regarding the use of glass fiber and/or the use of antioxidant processing aid in the alloy of polymers, Yang already disclosed such features for his copolymer (see line 2, column 25-35).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) or EP'017 alone or in view of Davis et al.

The APA or EP'017 discloses a buffer tube for use in a fiber optic cable.

It is noted that the flexural modulus in the APA or EP'017 is not stated to be in the range from about 180 to about 370 kpsi at room temperature.

However, it is submitted that to form buffer tube with the said claimed flexural modulus range is deemed obvious design choice through routine experimentation, optimum ranges and use of preferred material for achieving the desired results, In re Aller, 105 USPQ 233 CCPA 1955.

Davis, et al. also discloses that it is well known to form buffer tube 12 with a flexural modulus ranging from 60 to about 200 kpsi.

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to form the buffer tube of the APA or EP'107 with the claimed flexural modulus range.

The provision of a buffer tube having a wide range of flexural modulus would seem advantageous in providing a cable structure capable of withstanding high axial loads while allowing for more effective installation of the fiber optic cable.

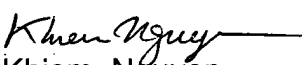
***Allowable Subject Matter***

5. Claim 4 is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem Nguyen whose telephone number is 571 272-2096. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Khiem Nguyen  
KHIEM NGUYEN  
PRIMARY EXAMINER